

REBUTTAL TESTIMONY
OF
W. KELLER KISSAM
ON BEHALF OF
DOMINION ENERGY SOUTH CAROLINA, INC.
DOCKET NO. 2020-125-E

1 **Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND POSITION.**

2 A. My name is W. Keller Kissam and my business address is 220 Operation
3 Way, Cayce, South Carolina. I am President, Electric Operations, Dominion Energy
4 South Carolina, Inc. (the “Company” or “DESC”).¹

5 **Q. ARE YOU THE SAME KELLER KISSAM WHO PREVIOUSLY**
6 **SUBMITTED DIRECT TESTIMONY IN THIS PROCEEDING?**

7 A. I am.

8 **Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?**

9 A. The purpose of my testimony is to respond to certain allegations made by
10 Elizabeth Stanton, PhD, on behalf of the Sierra Club. I would like to give the
11 Commission a sense of what it is like to deal in the day to day world of utility
12 operations with the issues Dr. Stanton discusses in the abstract.

¹ In April 2019, South Carolina Electric and Gas Company (“SCE&G”) changed its name to Dominion Energy South Carolina, Inc. as a result of the acquisition of SCANA Corporation by Dominion Energy, Inc. For consistency, I use “DESC” to refer to the Company both before and after this name change.

1 **Q. HOW LONG HAVE YOU BEEN INVOLVED WITH OPERATING AND**
2 **MONITORING DESC'S ELECTRIC SYSTEM?**

3 A. For over three decades, I have monitored the daily power generation and
4 energy consumption on the DESC system. The day begins early in utility
5 operations. Loads are low and relatively stable at night. But as people wake up and
6 begin their days, and as schools and businesses open, demand begins to increase and
7 the system must be ready to meet those demands. The early morning is when
8 conditions on the system are assessed, load forecasts studied, and the operational
9 plan for the day is set. For that reason, when I and other members of my team arrive
10 at our offices it is dark. Sometimes it is humid and still; at other times overcast or
11 stormy; every now and then it is freezing cold, as it is when we are facing winter
12 peaking conditions.

13 **Q. WHAT IS ONE OF YOUR MOST MEMORABLE DAYS IN UTILITY**
14 **OPERATIONS?**

15 A. January 6, 2014.

16 **Q. WHY IS THAT?**

17 A. Because on January 6, 2014, South Carolina was in the grip of a polar vortex.
18 Temperatures remained in the teens throughout the day. Skies were overcast. In the
19 pre-dawn hours, our load forecasters predicted that DESC would reach an historical
20 winter peak. And between the hours of 0500 and 0600, something happened that
21 we had not experienced before. The combination of extreme low temperatures and

1 high winds caused the temperatures inside some of our generation plants to drop to
2 levels we had never known. That forced instrumentation devices within the plants
3 to go off line. As a result, safeties lifted at the plants, and they took themselves off
4 line. In response, we had to initiate controlled rolling blackouts on the DESC
5 electric system to comply with FERC mandates to protect the bulk electric grid
6 within the region. Controlled rolling blackouts occurred throughout the day,
7 impacting tens of thousands of customers throughout South Carolina who lost heat,
8 light and power in rolling increments of fifteen minutes or longer.

9 **Q. HAS SUCH AN EVENT REPEATED ITSELF SINCE 2014?**

10 A. No. DESC took additional precautions to thermally insulate the generating
11 units critical to meeting customer demand. The cost of that thermal insulation is part
12 of the capital costs related to our remaining coal fired generation that Dr. Stanton
13 says was imprudent.

14 **Q. WHAT TYPE OF UNITS WERE AFFECTED IN 2014?**

15 A. The units impacted were coal, natural gas, and hydro electrical units.

16 **Q. WHY DID YOU NOT BUY CAPACITY OFF-SYSTEM IN 2014?**

17 A. No off-system capacity purchases were available. We reached out to multiple
18 systems, some as far away as Northeastern states. We tried to get as much power as
19 we could, and we still came up short until late in the day. Other utilities' generation
20 and transmission systems were stretched thin, as you would expect on a major
21 winter peak day.

1 **Q. IF ANY PARTICULAR UNIT HAD REMAINED ONLINE DURING THE**
2 **COLD WEATHER, WOULD THE CONTROLLED ROLLING**
3 **BLACKOUTS HAVE BEEN NECESSARY?**

4 A. No. If just A.M. Williams Station had remained online with its 610
5 megawatts, then the controlled rolling blackouts would have been avoided.

6 **Q. THAT HAPPENED IN 2014. HOW IS DESC DIFFERENT TODAY?**

7 A. As I stated previously, thermal encapsulation has prevented the reoccurrence
8 of generation loss due to temperature extremes. DESC has also converted units at
9 Urquhart and McMeekin from coal to natural gas and added the gas-fired Columbia
10 Energy Center (519 megawatts) to its generation fleet. In addition, DESC has
11 completed the retirement of three coal fired units at Canadys Generating Station.

12 **Q. BARRING ANY EQUIPMENT MALFUNCTION, IS ALL GENERATION**
13 **ATTACHED TO THE DESC ELECTRIC SYSTEM CAPABLE OF**
14 **PROVIDING NAME PLATE GENERATION CONSISTENTLY TO MEET**
15 **CUSTOMER DEMAND?**

16 A. No.

17 **Q. WHY NOT? PLEASE EXPLAIN.**

18 A. DESC has 864 megawatts of utility scale solar connected to its system with
19 more on the way. When I arrive at work, I bring up the generation operating
20 summary. The net output of this solar generation is zero. It remains that way
21 through first light and begins to increase as the morning progresses provided the

1 morning skies are not cloudy or overcast. When it is cloudy or overcast, solar
2 generation may remain at very minimal levels throughout the day.

3 **Q. HOW DOES THIS IMPACT DESC?**

4 A. DESC is now experiencing strong winter peaks. At winter peak, the highest
5 loads occur on winter mornings between essentially 0600 and 0730 when the sun is
6 not shining. Thus, the 864 megawatts of solar in no way contributes to meeting
7 customer needs when generation capacity is most critical during the winter.

8 **Q. HOW DOES THIS RELATE TO YOUR REBUTTAL TESTIMONY?**

9 A. Dr. Stanton advocates for disallowance of both capital and O&M costs at
10 Wateree, Cope, and Williams. She also alleges that these units be retired; no
11 maintenance be performed on these sites; and that DESC rely on “renewables,
12 batteries, demand response and virtual power plants.”

13 **Q. DO YOU BELIEVE YOU COULD MEET DESC CUSTOMER**
14 **REQUIREMENTS WITH SUCH A PORTFOLIO?**

15 A. No.

16 **Q. WHY?**

17 A. I firmly believe that a reasonable, balanced portfolio of generation is
18 necessary to provide customer service. Renewables, nuclear, natural gas,
19 hydroelectric, demand side management, and perhaps even batteries all will be
20 necessary to meet demand for electricity on the DESC system. Dr. Stanton singles
21 out DESC coal-fired units for attack. I agree that over time coal will not be a

1 generation fuel of choice; however, until advances in renewables afford them the
2 same ability to provide continuous supply, and until additional gas supplies are
3 available in our region, taking our coal-fired generation out of service would put our
4 ability to meet our customers' needs at risk.

5 **Q. DO ANY UTILITY SCALE SOLAR PLANTS ON THE DESC SYSTEM**
6 **HAVE BATTERY STORAGE CAPABILITIES?**

7 A. No.

8 **Q. WHY DO YOU BELIEVE THEY DON'T?**

9 A. It would have required additional capital investment on the part of the solar
10 developer, and pure economics prevented it. I do believe that with technological
11 advances and cost reductions, battery storage will become an integral part of the
12 DESC energy mix. However, their limited discharge capabilities limit them. And
13 to be reliable on peak, there must be a way to recharge them on overcast days, like
14 January 6, 2014, when solar farms generate very little electricity.

15 **Q. WHAT OTHER OPERATIONAL CHALLENGES DOES DEPENDENCY**
16 **ON RENEWABLES PRESENT?**

17 A. Just as there are high load days in winter when renewables contribute nothing
18 to the peak, there are low load, sunny days, particularly in the spring and fall, when
19 renewables present the opposite operating challenge. On such days, DESC has
20 experienced over-loaded conditions and has faced customer service issues on certain
21 areas of its system connected to utility scale solar plants. DESC makes every effort

1 to accommodate this unneeded influx of power. When days like this are forecasted,
2 DESC plans to run Fairfield Pump Storage unit in pump mode to store power for
3 use later and offset the uncontrolled solar output. DESC works diligently not to be
4 forced to issue a curtailments notice to a solar provider, but the coordination takes
5 great time and effort.

6 **Q. SO WHAT IS YOUR RESPONSE TO DR. STANTON'S CONCLUDING**
7 **TESTIMONY?**

8 A. Being an operator for over thirty years and being responsible for the daily
9 customer energy demands at DESC, I believe the key word for a generation portfolio
10 is "balance." Dr. Stanton advocates retiring coal plants on the DESC system based
11 upon capacity factors. Well, if capacity factors were the guide for generation, then
12 renewables would be rejected by her as well, because on the DESC system, their
13 collective capacity factor varies from 10-20%. So should we reject solar as an
14 energy source, for it is well below our capacity factors at Williams, Wateree and
15 Cope? Absolutely not.

16 Each existing energy source must be utilized according to the contribution it
17 can make to reliably serve customers. Nuclear is base loaded. Coal, as needed, is
18 base loaded. Natural gas, based upon cost comparison to coal, is either base loaded
19 or ramped up and down to accommodate the constant fluctuation of renewables.
20 Hydro and pumped storage are also dispatched in a like manner. Batteries and
21 perhaps even wind may one day be a critical part of generation as well.

1 We all desire cleaner and cheaper energy. But we must get there in a
2 responsible way, one that protects the interest of customers in a reliable and cost
3 effective system. It is dangerous to advocate for reliance only on emerging
4 renewable energy sources or for prohibiting the continued reliance on an
5 established, critically-needed source of capacity to serve customers when the
6 practical alternatives are not yet apparent. Until such time as technological
7 improvements make changing the energy mix a responsible choice, prohibiting the
8 investment in units that form part of the backbone of our generation system is
9 dangerous.

10 **Q. WHY IS THIS IMPORTANT?**

11 A. In August of 2020, the state of California experienced rolling blackouts. One
12 of the root causes was a reliance on renewables (solar). When temperatures
13 remained elevated into the early evening, solar farm production went minimal, and
14 the result was an over-loaded grid requiring rolling blackouts to prevent a regional
15 collapse of the electrical grid. A solution to this situation was to complete natural
16 gas pipelines to bring needed capacity to serve natural gas fired generators to
17 balance this problem.

18 **Q. SO WHAT ARE YOUR CONCLUSIONS?**

19 A. The responsibility of having to match generating resources to customer
20 demand in real time, 365 days a year, provides me with a different perspective. Dr.
21 Stanton champions an academic and theoretical perspective in her testimony and

1 analysis. This is understandable but dangerous in practice. The real world of utility
2 operations demands a balanced portfolio of varying generation assets to meet
3 customer needs, not an exclusive reliance on “renewables, batteries, demand
4 response and virtual power plants” to replace current coal resources, as Dr. Stanton
5 advocates. All these resources—renewable, fossil and nuclear—are valuable, but
6 only in a balance that calls on the strengths and advantages of each to ensure that
7 customers receive reliable service, now and as the electric system transitions to a
8 new and cleaner form. No one type of generation resource can keep the lights on
9 for our system at all times. This is the minimal expectation our customers should
10 have. Customers should expect for the lights to stay on through a variety of
11 conditions, and we should all expect that they will be quick to complain when they
12 do not. This expectation is reasonable, and it is one we should meet with practical,
13 not theoretical solutions.

14 **Q. FINALLY, BRANDON BICKLEY ON BEHALF OF THE SOUTH**
15 **CAROLINA OFFICE OF REGULATORY STAFF PROPOSES SOME**
16 **CHANGES TO THE STORM DAMAGE REMEDIATION RIDER**
17 **REINSTATEMENT. WHAT CHANGES DOES HE PROPOSE?**

18 **A.** Overall, Mr. Bickley does not object to the Storm Rider being reinstated. But
19 he wants to cap the annual collection at \$5 million instead of \$9.8 million, which
20 reflects our actual experience over the past five years, and cut off collections if the
21 \$5 million cap is reached in any twelve-month period. He also wants to limit the

1 total aggregate balance of the Storm Rider reserve account to \$50 million instead of
2 the \$100 million requested.

3 **Q. DO YOU AGREE WITH THESE CHANGES TO THE COMPANY'S**
4 **PROPOSAL?**

5 A. No, I do not. As the Company explained, \$9.8 million is the average
6 incremental storm restoration cost for 2014-2019. Five million dollars is only half
7 that amount and will not be adequate if past experience is a guide. Plus, the proposal
8 to cut off the accrual in any month where the \$5 million cap is reached may create
9 a customer perception nightmare with rates going up and down, perhaps month by
10 month, based on the rolling 12-month calculation.

11 I strongly disagree with the total balance being capped at \$50 million. Given
12 historical data, at \$9.8 million in annual collections, the average balance will be zero
13 over time. If we do have a calm period, we will need to build up reserves, because
14 our luck will not last forever. One major hurricane hitting us in the right spot could
15 wipe out the reserve account even if it were capped at \$100 million. One hundred
16 million is simply not too much money to set aside so that if a major storm comes
17 along, we can quickly restore power and minimize any rate increase to pay for it.

18 **Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?**

19 A. Yes, it does.